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ABSTRACT

This is the third annual report of teacher supply and demand in Florida. It looks at measures of teacher shortages during the 1983-84 school year, compares the projected supply of teachers by subject field with the numbers needed during 1985-86, and then projects the demand for teachers through the end of the century. Teacher vacancies in Florida during fall 1983 varied across subject fields, with some fields showing a much higher percentage of positions not filled by certified personnel than others. Among those fields where there was a higher than average number of positions unfilled or filled out-of-field were mathematics, science, English, emotionally handicapped, specific learning disabilities, and mentally handicapped, all of which, except English, appeared on a similar list the prior year. The most important factor in teacher supply and demand in Florida during the fifteen years beyond 1985 is the shift in the age distribution of the population. Specifically, the state faces a period of sharply rising K-12 students and a decreasing number of persons in the age groups which provide most of the new teachers. (JD)

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Teacher Supply and Demand In Florida:

Third Annual Report

September 1984

SP 028 416

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Executive Summary

This is the third annual report of teacher supply and demand in Florida. It looks at measures of teacher shortages during the 1983-84 school year, compares the projected supply of teachers by subject field with the numbers needed during 1985-86, and then projects the demand for teachers through the end of the century.

The 1983-84 School Year

Teacher vacancies at the beginning of the 1983-84 school year represented 7.6 percent of the total number of the teachers in Florida classrooms. By October 1, 84 percent of these vacancies had been filled by teachers certified in the appropriate fields, 7 percent had been filled by teachers not in the appropriate fields, and 9 percent remained unfilled or were filled by temporary substitutes. Twenty-five percent of these newly hired teachers had taught in another Florida school district the prior year and, therefore, while new to the district, were not new to the state public education system.

These general statistics on teacher vacancies in Florida during fall 1983 vary across subject fields, with some fields showing a much higher percentage of positions not filled by certified personnel than others. Among those fields with a higher than average number of positions unfilled or filled out of field were mathematics, science, English, emotionally handicapped, specific learning disabilities, and mentally handicapped, all of which, except English, appeared on a similar list the prior year.

According to information collected from the school districts, the number of teachers resigning during the 1982-83 school year was down from 8.1 percent to 6.8 percent over the previous year. There was indication that some of this decrease may be because it is more difficult for experienced teachers to transfer to other districts. Only 24 percent of the resigning teachers (exclusive of staff reduction) left because of retirement. No detailed information is available on other reasons for staff terminations, nor is data collected on terminations by subject area.

One new piece of information available this year is the number of full-time-equivalent (FTE) teachers teaching out of field. During fall 1983, 5.0 percent of all classes (4.2 percent of all FTE teachers) were taught by teachers who did not have the appropriate certification. These percentages

varied widely by subject field. For instance, among FTE teachers of elementary education, the largest single field, only 0.7 percent were teachers out of field, while in other fields, notably English, mathematics, science, emotionally handicapped, gifted, and agriculture, more than 7 percent of the teachers were teaching out of field.

Teacher supply in this report is measured by the number of graduates from Florida teacher education programs, the number of candidates passing the teacher certification examination, and the number of new teachers certified. The most conclusive statement that can be made about teacher supply in Florida is that a large percentage of new teachers come from out of state. During 1983-84, 64 percent of the newly certified teachers and 54 percent of these passing the teacher examination (including those who did not actually become teachers) came from out of state. The subject fields with a higher than average percentage of newly certified teachers from out of state include English (71 percent), mathematics (69 percent), foreign languages (82 percent), and trades/industrial (90 percent).

The number of 1981-82 graduates of Florida teacher education programs was slightly higher than projected the prior year, but the number is projected to be down slightly in 1983-84. However, a small increase for both 1983-84 and 1984-85 is projected in the critical areas of mathematics and science.

Future Supply and Demand

Looking ahead to 1985-86, the report makes projections both of the number of teachers needed and teacher supply. Demand takes into account teacher terminations, the number of teachers now teaching out of field, and the additional classes anticipated because of enrollment increases in grades K-3 and the implementation of new state high school graduation requirements. It is estimated that by 1985-86 the state will need about 8,000 additional teachers if the out-of-field teachers are not included, or about 11,400 if they are. Florida education programs expect to graduate 3,200 students in 1984-85. If the state continues to attract the same proportion of out-of-state teachers as in the past, an estimated 8,000 will be available to teach. Although this corresponds to the lower of the two estimates of the demand for that year, there is a poor match by subject field. For instance, the number projected to pass the teacher examination that year in elementary education represent 154 percent of the projected need. Teacher candidates in English equal 40 percent of those needed, while those in mathematics equal 27 percent.

The most important factor in teacher supply and demand in Florida during the fifteen years beyond 1985, overshadowing every other issue, is the shift in the age distribution of the population. Specifically, the state faces a period of sharply rising K-12 enrollments and a decreasing number of persons in the age groups which provide most of the new teachers. During the 1980-83 period the total K-12 enrollment in Florida public schools was relatively stable. During those same years the number of 22-29 years olds in the state increased by about 11 percent. The trends beween now and the end of the century will be the reverse of the recent past, with a significant growth in the total K-12 enrollments and significantly fewer 22-29 year olds. From now until 1990 all of the K-12 growth will be in grades K-6, as a new baby boom begins its move through the school system. Beyond 1990 the situation becomes even more critical. During the decade of the 1990's the size of the potential teacher pool will continue to decline, while enrollments in grades 7-12, the grades already experiencing shortages in specific subjects fields, will swell. Current projections indicate grades 7-12 will grow by 21 percent from 1990 to 1995 and by 16 percent from 1995 to 2000.

The challenge that Florida education must face is to find and implement strategies to deal with these demographic trends. These strategies may include influencing the type of career choices made by young adults (including getting more of them to enter the subject fields which are already experiencing shortages), attracting people in other age groups to enter or reenter education, improving the system so that fewer teachers leave education prematurely, and using technology and alternative ways for providing instruction.

Introduction

The challenge of attracting and retaining competent teachers is gaining the national attention of research think tanks, national commissions, and televisions specials. Many people are aware that teachers in the critical areas of science and mathematics are in short supply. The first two annual reports in this series also sounded this note.

However, what is not as widely known is that these shortages have occurred during a period when population trends were on the side of education plenty. For one thing, the 1970's and early 1980's have been a period when the number of 22-29 year olds, the age group from which most new teachers come, has been increasing. The reason for this increase is that this has been a period when the last of children born during the post-World War II baby boom have reached adulthood. At the same time, the school-aged population has been declining, or, in the case of Florida, has at least been stable.

As this report points out, the years ahead will be marked by a reversal of trends, as the early adult years see the end of one baby boom and grades K-6 see the beginning of another--the echo effect of one population bulge giving birth to another. It is in those years between, the years in which the smaller-sized cohorts are reaching adulthood and choosing careers, that education faces its biggest challenge. Current teacher shortages are the product of competing job opportunities, especially from increased employment options for women and minorities. A transformed demographic landscape is about to be added to these economic disincentives to enter the field of teaching.

Florida has its own speeded-up version of this evolution. When grade K-12 enrollments decline nationwide, Florida's are usually stable. Population stability elsewhere usually translates into population increases in Florida. When the number of births went up three percent in the nation in a recent year, the percentage in Florida went up nine percent. The reason for these differences is the continued high level of inmigration into the state. At the same time, even though Florida has its own unique changes in its population profile, national demographic trends also have an enormous impact on the supply of teachers in the state since about sixty percent of the new teachers come from out of state. As other states absorb more of their graduates and begin to experience more serious shortages, Florida will doubtless find it more difficult to attract teachers from out of state.

The report that follows summarizes data relating to teacher supply and demand in Florida from a wide range of sources. Because each of these sources is complex and each has its limitations, the report is more detailed than might have been preferred. Such an approach does not make for easy reading. However, taking this approach seemed necessary both for accuracy and clarity.

Review of Data Sources

This report relies on the following Department of Education data bases: (1) the number of teachers and students by subject field, including teacher teaching out of field (Course Code Data File), (2) teacher vacancies (Part V of the Teacher Staff Survey), (3) teacher terminations (retirements and resignations for other reasons), (4) the number of new teachers being certified (the Active Certificate File), (5) the number of teachers passing the teachers certification examination, and (6) projected enrollments. The numbers of current and projected teacher education graduates by field were tabulated from a survey collected by the Florida Association of Colleges of Teacher Education.

The information available has changed in several ways since the prior report.

(1) The vacancy survey now asks that the number of new teachers hired be categorized as to whether or not they taught the prior year in another Florida school district. This makes it possible to estimate the portion of teacher turnover that is due to teachers transferring from one school district to another.

(2) The Course Code Data File now includes information on classes taught by teachers teaching out of field.

(3) The number of persons passing the teacher certification examination is no longer coded by subject area. Thus the examination results can be used only to determine the total number passing the examination. To supplement this information, the Teacher Certification File was used to determine the number of newly certified teachers by in state and out of state, and the proportion in each subject field.

Current Demand for Teachers

Demand: Teacher Vacancies

This section of the report is based on the results of a survey taken during fall 1983 of teacher vacancies in the 67 Florida school districts. The vacancies covered by the survey occurred from July 1 to October 1, 1983, and thus do not include vacancies resulting from resignations during the school year. However, the survey presents a fairly complete picture of all vacancies. For instance, the number of vacancies in fall 1983 equaled about 88 percent of the number of classroom teachers terminating during the entire 1982-83 school year.

Vacancies: Number of New Hires by Subject Field: Fall 1983 Compared to Fall 1982. The estimated number of vacancies in fall 1983 was 1.07 percent higher than the number for fall 1983, mirroring an increase in FTE enrollments of 1.06 percent from 1982-83 to 1983-84. There was, however, a slight shift in the distribution among program areas, with the vacancies in the basic programs representing a slightly larger percentage of the total than they did in fall 1982 and the exceptional and vocational programs representing a slightly smaller percentage. (See Table 1.) This seems to be consistent with the increased emphasis throughout the

Table 1
Estimated Number of New Hires
Florida School District
By Program Areas*

Program Area	FALL 1982 Number	FALL 1982 Percentage	FALL 1983 Number	FALL 1983 Percentage
Tot. Basic	3,930	73.0	4,345	75.2
Tot. Excep.	1,026	19.1	1,036	17.9
Tot. Voc.	426	7.9	398	6.9
Total	5,382	100.0	5,779	100.0

*Taken from Tables A5 and A6.

state on proficiency in academic subjects, a trend which can also be seen among subject areas within the basic program, as shown in Tables 2 and 3. A larger percentage of vacancies occurred in such fields as mathematics, science, and foreign languages, and a smaller percentage in such fields as elementary education, physical education, and music.

Table 2
Basic Fields Which Represent a Smaller Percentage
Of the Total Number of New Hires
In Fall 1983 Than in Fall 1982*

Subject Fields	FALL 1982 Number As A Percentage Of All Fields	FALL 1983 Number As A Percentage Of All Fields
Elem. Educ.	30.5	28.9
El. Read Spec.	1.1	0.4
Health/PE	5.3	4.2
Art	1.6	1.4
Music	4.1	3.8

*Taken from Table A6.

Table 3
Basic Fields Which Represent a Larger Percentage
Of the Total Number of New Hires
In Fall 1983 Than in Fall 1982*

Subject Fields	FALL 1982		FALL 1983	
	Number	Percentage	Number	Percentage
English	561	10.4	686	11.9
Math	351	6.5	411	7.1
Science	310	5.8	481	8.3
Soc. Stud.	200	3.7	283	4.9
For. Lang.	75	1.4	104	1.8

*Taken from Tables A5 and A6.

Table 4
Subject Fields With More Than Nine Percent of New Hires
Not Certified in the Appropriate Field*
Fall 1983

Subject Fields	Total Number of New Hires	Percentage Certified In The Appropriate Field	Percentage Not Certified In The Appropriate Field
El. Read. Spec.	24	87.5	12.5
Math	411	90.9	9.1
Science	481	86.2	13.8
For. Lang.	104	90.9	9.1
Ment. Handi.	192	87.4	12.6
Phy. Imp.	15	69.2	30.8
SLD	263	83.2	16.8
Emot/Sev. Hd.	221	76.8	23.2
Gifted	63	65.1	34.9
Home/Hos.	10	87.5	12.5
Var. Excep.	85	88.4	11.6
Dist.	18	78.6	21.4

*Taken from Table A3.

Vacancies: Subject Fields Which Were Difficult to Fill in Fall 1983. One indication of teacher shortages is the percentage of newly hired teachers who were not certified in the appropriate field. Those subject fields in which 9 percent or more of the new teachers hired during fall 1983 did not have the proper certification are listed in Table 4. These fields include elementary reading, mathematics, science, foreign languages, and a number of exceptional education fields.

Another way to determine which fields have the greatest shortages is to look at the size of the shortages as well as the percentages. This eliminates those fields in which the total number of positions to be filled is small. Table 5 gives information on fields which had (1) fifty or more positions unfilled or filled out of field and (2) fifteen percent or more of the vacancies in that field unfilled or

Table 5
Subject Fields Which Were
The Most Difficult to Fill*
Fall 1983

Subject Fields	Estimated Number of Vacancies	Vacancies Unfilled or Filled Out of Field	PERCENTAGE OF VACANCIES		
			Filled Out of Field	Unfilled	Unfilled or Filled Out of Field
English	753	116	6.5	8.9	15.4
Math	443	69	8.5	7.2	15.7
Science	513	99	13.0	6.2	19.2
SLD	284	65	15.6	7.4	23.0
Emot/Sev. Hd.	261	91	19.6	15.3	34.9

*Taken from Appendix Table A6. Defined as fields having (1) 50 or more positions unfilled out field and (2) fifteen percent or more vacancies unfilled or filled out of field.

filled out of field. These include the basic fields of English, mathematics, and science, and the exceptional education fields of specific learning disabilities and emotionally handicapped.

The most important addition to this list of subject fields experiencing teacher shortages since fall 1982 is English. A number of personnel directors reported that they had difficulty finding enough English teachers to staff the classes added to reduce class size for teaching writing skills to the required limit. The field of foreign languages does not appear in Table 5 because, although the percentage of inappropriately certified teachers was higher than might be desired, only nine teachers are involved. Furthermore, only three foreign language postions in the state were reported unfilled by October 1.

Vacancies: Percentage of Newly Hired Teachers from Other School Districts. As indicated in last year's report, one piece of information not available was the percentage of newly hired teachers who taught the prior year in another Florida school district. When evaluating teacher demand from the standpoint of the entire state, these individuals are technically not "new hires" in the sense that they are newly entering public education in Florida. The fall 1983 survey instrument therefore asked districts to indicate how many newly hired certified teachers taught last year in another Florida school district. The responses show that about one fourth of these teachers were not new to public education but were transferring from one school district to another, with little differences showing up across subject field. The fields with the smallest percentage of simple turnover (teachers moving within the state), and thus the largest percentage of genuine new positions, are fields which are either very small, such as occupational and physical therapy, and hospital and homebound; or which are not currently areas of critical need, such as agriculture and business. (See Appendix Table A3.)

Knowing what percentage of newly hired teachers represent inter-district transfers makes it easier to estimate how many teacher terminations represent teachers resigning to accept employment in other Florida school districts.

Demand: Teacher Terminations

The total number of terminations (hereafter defined as all terminations except those caused by staff reduction) for the state for 1982-83 was 5,549.[1] This includes 1,334 retirements, 3,938 resignations, and 277 dismissals. Compared to the total number of classroom teachers for 1982-83 (81,982), this 5,544 total represents a termination rate of 6.8 percent. This is smaller than the 8.7 termination rate used in the 1983 Teachers Supply and Demand Report, indicating that a smaller proportion of teachers seem to be resigning. Forty-five districts did indeed report such a decline--33 of which showed a decrease of 10 percent or more over the prior year, including 5 of the 12 largest districts. During telephone calls to verify the data submitted, one reason for the smaller number of resignations cited by several personnel directors was that fewer experienced teachers seem to be leaving to accept jobs elsewhere because schools are not eager to hire teachers at higher salary levels.

[1]This number is 349 higher than reported in the Division of Public Schools MIS Statistical Briefs Series 84-128 because of a correction for Palm Beach County. The number reported in the brief for Palm Beach resignations was 194. The district later corrected this to 543.

In addition to the decline in the percentage of teachers terminating, another reason for the smaller number of terminations is an error in the number reported by Dade County for 1981-82. This number was given as 1,019, compared to 589 in 1982-83. Upon rechecking these figures, the district discovered that the earlier figure included transfers from school to school within the district and even from position to position within individual schools. The difference between the number reported for Dade for the two years represents 8 percent of the terminations reported for the entire state for 1982-83, so the reporting error had a decided impact. However, district staff stated that it would be difficult to go back now and determine the correct number.

It can be concluded that the proportion of teachers terminating during 1982-83 is less than the prior year, but how much less is uncertain. If Dade's total for 1982-83 is used in calculating the state total for 1981-82, and if all other district reports are correct, this would indicate that the termination rate has decreased from 8.1 percent to 6.8 percent, a significant decrease. It remains to be seen if the trend will continue at this lower level. If so, this should help to offset the increased demand due to enrollment growth discussed later in the report.

Patterns in teacher terminations can be better understood if two trends are kept in mind. One is that a large proportion--from 71 to 78 percent--of the terminations are due, not to retirements or to dismissals, but to resignations for other personal reasons. Some of these resignations for other personal reasons, perhaps 35 to 40 percent, represent inter-district transfers. The teachers transferring from one school district to another are a loss to a particular school district, but not to public education in Florida as a whole. But the rest of the resignations for personal reasons, from 37 to 47 percent of all terminations, represent teachers leaving the classroom short of retirement, be it to move to another state, to return to school, to stay at home with the family, or to seek employment outside education. The reasons for leaving are just as varied as are the options teachers plan to explore after leaving the classroom--family considerations, dissatisfaction with teaching conditions--including salary, incompatibility, burnout, desire for advancement, and others. Regardless of the reason, the 2000-3000 teachers falling into this category each year present the education system in the state with an opportunity for recouping some of its annual losses in classroom teachers.

The other trend to note is the number of retiring teachers, which hit a low of 901 in 1980-81, and then increased to 1,167 in 1981-82, and to 1,334 in 1982-83. As a percentage

of all teachers in the school system, these numbers represent an increase of only one tenth of a percent each year and, therefore, may not be significant. Nevertheless, the trend bears watching. Reference is made from time to time to the number of teachers hired during the 1950's, a period of increased enrollments, and to the fact that those who remained in the classroom must now be approaching retirement. Since no age information is collected on current teachers, it is difficult to determine whether it is true that a higher-than-average proportion of teachers may be approaching retirement. Should the number of teachers retiring each year continue to rise, this may indeed mark the end of the cycle of an earlier period of expansion. More importantly, an increase in retirements would increase the number of new teachers needed.

No information is available on the number of teacher terminations by subject area. The termination rate for the most recent year, was used to project the total number of resignations each year, while the distribution by subject field was based on the vacancy distribution for fall 1983. This seemed to be an improvement over the procedure used in the last report, which assumed the same termination rate for each subject area.

Demand: Teachers Teaching Out of Field

In fall 1983 the Department of Education began collecting information on the number of teachers in each course teaching out of field. Table 6 summarizes this information by program area. It shows that during fall 1983, 4.2 percent of all teachers were teaching classes for which they did not have the appropriate certification.[2] A larger percentage of teachers were teaching out of field in the exceptional education fields (7.4 percent) than in basic and vocational fields.

Table 7 lists all the subject fields where more than 7 percent of the teachers were teaching out of field. In addition to these eight subject fields, elementary education is also shown because it is the largest single field and therefore serves as a point of reference for the other fields. The eight fields with more than 7 percent out of field include the important basic areas of English, mathematics, science, and social studies. Science has the highest percentage of teachers teaching out of field (9.2 percent) of the basic fields.

[2]All out-of-field data shown is based on full-time-equivalent teachers. Thus if teachers were teaching in more than one subject area, they were counted as out of field for only the proportion of time they actually spent teaching out of field.

Table 6
Number of Teachers
Teaching Out of Field
Fall 1983
By Program Area

Program Areas	Number of FTE* Teachers 1 Total	2 Teaching Out of Field	3 Percentage 2/1
Tot. Basic	62,295	2,402	3.9
Tot. Excep.	9,697	713	7.4
Tot. Voc.	7,558	257	3.4
Total	79,550	3,372	4.2

*Full-time equivalent

Table 7
Number of Teachers
Teaching Out of Field
Fall 1983
Selected Fields

Subject Fields	Number of FTE Teachers 1 Total	2 Teaching Out of Field	3 Percentage 2/1
Elem. Educ.	28,114	185	0.7
English	7,343	537	7.3
Math	5,536	437	7.9
Science	4,406	399	9.1
Soc. Stud.	4,243	349	8.2
SLD	2,339	171	7.3
Emot/Sev. Hd.	1,196	209	17.5
Gifted	800	109	13.6
Agri.	497	50	10.1

One question sometimes asked is whether there is a larger percentage of teachers teaching out of field in advanced-level mathematics and science classes than there are in general-level classes. Since the information is collected by individual course title, it is possible to answer this question. For mathematics it was determined that courses in algerbra I and higher had a smaller percentage of out-of-field teachers than did general

mathematics courses. (See Table 8.) The pattern is not as clear in science. While general science and earth science had a larger percentage of out-of-field teachers than did chemistry, physics had a significantly higher proportion of out-of-field teachers than did the other science areas. In actual percentages, 10.4 percent of the general science teachers and 6.8 percent of the chemistry teachers were teaching out of field, while 11.3 percent of the physics teachers (a total of 34 FTE teachers) were teaching out of field.

Table 8
Number of Teachers
Teaching Out of Field
Fall 1983
Areas of Math and Science

	1 Total	2 Teaching Out of Field	3 Percentage 2/1
Math Gen	4,054	401	9.9
Alg. I/Geom.	1,014	30	2.9
Alg. II/Higher	469	7	1.4
Total Math	5,536	437	7.9
Sci. Gen.	1,972	204	10.4
Earth Sci.	480	43	8.9
Biol.	1,187	8	7.3
Chem.	469	32	6.8
Physics	298	34	11.3
Total Science	4,406	399	9.1

In addition to the four large basic fields, other fields with more than 7 percent of teachers teaching out of field are the exceptional education fields of specific learning disabilitues (7.3 percent out of field), emotionally handicapped (17.5 percent) and gifted (13.6 percent), and the vocational field of agribusiness (10.1 percent).

Assigning teachers to classes where they are not appropriately certified is not always an indication that there is an undersupply of teachers. Often the decision is made because of scheduling imbalance--a principal needs a teacher to teach four English classes and one class in American history, for instance. Ideally the principal will find a teacher certified to teach in both fields, but all too often a teacher with such a combination is not available. But for the eight fields mentioned, with percentages of out-of-field teachers far above the state overall average of 4.2 percent, one may conclude that either there is a distinct shortage problem (applicable to the subject fields which have been so designated on other shortage measures) or there seems to be a pattern of

assigning out-of-field teachers to these classes as a way of filling split-field schedules. Social studies, which does not seem to be a shortage field by any of the other indicators cited, fits in this latter category.

Regardless of the reason, the state education system needs to lower significantly the percentage of teachers teaching out of field, either by graduating enough new teachers in the fields where they are most needed or by encouraging existing teachers to upgrade their certification in the areas of need. A high target for extending the certification areas should probably be those teachers who are already teaching one or more classes out of field on a long-term basis.

Current Supply of Teachers

Supply: Candidates Passing the Teacher Certification Examination

To be certified to teach in Florida, each new applicant must pass a written examination containing sections in mathematics, reading, writing, and professional education. This test is also used as a measure of quality in teacher education programs. During the 1981 to 1983 period from 79 to 86 percent of all test applicants passed all four sections of the examination. In April 1983 the State Board of Education made the test more difficult by raising the cut-off score. Since then from 78 to 80 percent of the candidates have passed all four sections of the examination.

Candidates taking and passing the teacher certification examination numbered approximately 8,200 during 1981-82, 7,200 during 1982-83, and 8,900 during 1983-84. One reason more applicants took the examination during 1983-84 was that the regulations governing who could take the examination changed. Earlier, teaching candidates could not take the examination unless they had completed the certification process. Applicants may now take the examination if they have a degree and can qualify for an initial temporary certificate, or if they are a student in an approved teacher education program expecting to graduate within six months. This rule change seems to have increased the number of applicants both because applicants are not required to have already completed the certification process and because they do not have to be graduates of approved teacher education programs. The increase due to the waiver of the certification requirement may be temporary in that the backlog of certification applicants presumably have now taken the examination. The increased number due to the new pool of applicants--

applicants with degrees, but who have not completed teacher education programs--may continue, but its impact on teacher supply is uncertain. Some college graduates who do not seriously plan to become teachers seem to be taking the examination to extend their employment options. It may be that others want to become teachers but are not finding a school district willing to hire them because of their lack of preparation. Schools are required to provide extensive structured support for new teachers who do not have any professional teaching preparation.

The total number of candidates passing the teacher certification examination is an important element in the projection of teacher supply. However, this information is of limited value without knowing the certification areas the candidates represent. Data available for the first few administrations of the examination included the candidates' major subject fields. Since coding this data slowed up the processing of examination results, this information was not included for graduates of out-of-state and Florida unapproved programs after August 1981, and for all programs after June 1983. Therefore, unlike last year's report, the Active Certificate File was used to arrive at an estimate of the current supply of teachers by subject field and, subsequently, to project the future supply by subject field.

Supply: Newly Certified Teachers

Extensive information is collected on the certification of teachers in Florida. However, no method has been developed for keeping track of current employment status of teachers once they are certified. Thus it is impossible to learn how many are currently teaching in Florida, how many have left Florida or the field of education, how many are available for teaching employment, or even how many are deceased. A survey of a sample of the Active Certificate File to determine the employment status of certified persons was taken during 1980, but the results were not generalizable because of a low response rate. (One problem is that no way has been found to keep addresses current.)

While the Active Certificate File cannot be used to estimate the size of the potential teacher pool, data can be retrieved on the number of certificates issued during each year to persons who have never before been certified to teach in Florida. This information makes it possible to categorize the newly certified teachers by certification field and by the college or university where the work was completed. This later information was used to classify each certificate as in Florida or out of Florida.

Because applicants can be certified in more than one certification area, it was difficult to avoid duplicate counting. The usual procedure for summing records in the file, for instance, resulted in persons certified in both English and social studies being counted in both fields. If a multiple certification occurred in the same general field--such as earth science, biology, and chemistry--the same teacher could be counted three times in the same field, in this case science. It was decided to count only the first certification field, which assumes that the applicants would list their preferred or most qualified field first. This approach gives an accurate total, but suppresses certain supplemental information. Perhaps next year a procedure can be worked out for counting by multiple fields, allowing for judgment as to which field to use in classifying individuals who have multiple certification.

The information from this file does not give a complete picture because it does not include teachers formerly certified who are returning to teaching. There is therefore a gap between the total of newly certified teachers and the total of candidates taking the teacher certification examination. For the 1983-84 year the number of newly certified teachers totalled about 5,800, compared to a total taking the examination of about 8,900. For reasons already cited, the 5,800 certification total, however, might better be compared to 7,200, the number passing the examination the prior year.

During 1983-84 nearly 64 percent of the newly certified teachers completed their course work at colleges and university outside of Florida. (See Table 9.) In the vocational fields an even higher proportion, 70 percent, of

Table 9
Distribution of Newly Certified Teachers
By Florida and Out of Florida*
1983-84
By Program Area

Program	Percentage Applicants From Florida	Out of Florida
Elem. Educ.	37.9	62.1
English	28.9	71.1
Math	31.1	68.9
Science	35.2	64.8
Soc. Stud.	30.4	69.6
For. Lang.	18.0	82.0
Tot. Excep.	46.8	53.2
Tot. Voc.	29.9	70.1

*Taken from Appendix Table A9.

Table 10
Selected Subject Fields Distribution of
Newly Certified Teachers, 1983-84
Compared to Distribution of Vacancies, Fall 1983*

Subject Fields	Number in Each Subject Field as a Percentage of All Fields: Newly Certified Teachers	Vacancies
Elem. Educ.	41.3	28.8
English	7.9	11.9
Math	4.6	7.0
Science	5.9	8.1
For. Lang.	2.7	1.7
Health/PE	7.4	4.2
SLD	2.6	4.5
Emot/Sev. Hd.	2.1	4.1

*Taken from Appendix Table A11.

Table 11
Estimated Number of Newly Certified Teachers in 1983-84
From Florida Colleges and Universities
Compared to the Number of 1982 Graduates,
Florida Teacher Education Programs
Selected Fields

Subject Fields	1 Graduates Teacher Education Programs	2 Estimated Number New Certified Teachers	3 Percentage (1/2)
Elem. Educ.	1,263	912	0.72
English	131	134	1.02
Math	94	84	0.89
Science	80	121	1.52
For. Lang.	26	29	1.11
Health/PE	373	153	0.41
SLD	176	127	0.72
Emot/Sev. Hd.	163	93	0.57

*Taken from Appendix Table A10.

teachers were educated out of state, while out-of-state teachers comprised 53 percent of the newly certified teachers in exceptional programs. Table 9 also shows percentage of in-state and out-of-state new teachers in selected major subject fields. The subjects with the highest proportion of new teachers from out of state are English (71 percent) and foreign languages (82 percent). Florida's heavy reliance on out-of-state teacher education programs for foreign language teachers has been noted in earlier supply and demand reports.

One way to better understand the current relationship between supply and demand is to compare the numbers from the certification file with two other sources of information, the vacancy survey and the Florida teacher education graduate survey. The percentage distribution of both the newly certified teachers and vacancies for fall 1983 in selected fields is shown in Table 10. A contrast can be seen especially in elementary education, which represented 41 percent of all newly certified teachers but only 29 percent of all vacancies. A similar contrast can be seen in health/physical education. For the other fields listed--English, mathematics, science, foreign languages, specific learning disabilities, and emotionally handicapped--the opposite is true. For these fields, the number of vacancies as a percentage of all vacancies is much higher than is the corresponding percentage of newly certified teachers.

Table 11 compares the number of graduates of Florida teacher education programs in selected fields in 1982-83 with the estimated number of newly certified teachers in 1983-84. In most fields shown fewer teachers were certified than graduated. Two alternate reasons might be posed. The first, which might apply to elementary education, is that not all graduates are able to find teaching positions in their field. The second, more likely to apply to mathematics and emotionally handicapped--both shortage areas--is that a number of graduates obtain employment outside of public education or in another state than Florida. In English, science, and foreign languages the number of new certificates is larger than the number of graduates. This seems to indicate that the newly certified teachers include science and English graduates from outside teacher education programs or graduates from earlier years.

Teacher Supply: Graduates of Teacher Education Programs

Each year a survey of projected teacher education graduates by subject field is collected for the Department of Education by the Florida Association of Colleges for Teacher Education. This section is a summary of information received from the survey taken in fall 1983.

As shown in Table 12, the number of persons graduating from Florida teacher education programs in 1982-83 was larger than expected. This is in contrast to 1981-82 when there were 442 fewer graduates than had been projected the prior

Table 12
Number of Graduates
Teacher Education Programs
Selected Fields

Subject Fields	1 1982-83 Projected**	2 1982-83 Actual	3 1983-84 Projected	4 1984-85 Projected
Elem. Educ.	1,183	1,263	1,138	1,173
English	154	131	131	149
Math	65	94	135	177
Science	74	80	104	137
SLD	218	176	144	157
Emot./Sev. Hd	119	163	167	181
Total Basic	2,460	2,581	2,557	2,705
Total Exceptional	***	660	616	652
Total Vocational	150	184	177	212
Total	***	3,425	3,350	3,589

*Taken from Appendix Table A12.
**Number of graduates 1982-83 as projected on last year's survey.
***Not comparable to this year's survey because most speech therapy graduates were not included.

year. This may indicate that teacher education students are now more likely to complete their programs. If this is true, it is not true for every subject field. Table 13 shows the numbers of projected and actual graduates for the last two years for the important basic fields of elementary education, English, mathematics, science, and social studies. During 1981-82 there were fewer mathematics and social studies graduates than projected, whereas in English there were considerably more. During 1982-83 this pattern changed, with English and social studies showing considerably fewer graduates than projected and elementary education, mathematics, and science showing considerably more. This may indicate only that it is difficult to accurately project graduates by subject field. However, a more positive conclusion would be that getting the word out that Florida needs more qualified science and mathematics teachers has influenced the decision of potential teacher candidates.

As can be seen in Table 13, in general the number of graduates is projected to decrease in 1983-84 and increase in 1984-85. However, a sizable increase for both years is projected in the critical areas of mathematics and science. This can be further seen in Table 14, which lists fields which represent an increasing percentage of all fields. Fields in this category are English, mathematics, science,

Table 13
Number of Graduates
Teacher Education Programs
Compared to Projected

Subject Fields	1 1981-82 Projected	2 1981-82 Actual	3 1982-83 Projected	4 1982-83 Actual
Elem. Educ.	1,224	1,232	1,183	1,263
English	101	133	154	131
Math	88	52	65	94
Science	36	35	61	80
Soc. Stud.	184	117	135	107

Table 14
Number of Teacher Education Graduates
Selected Fields Which Represent
An Increasing Percentage of All Fields*

Subject Fields	1 1982-83 Actual	2 1983-84 Projected	3 1984-85 Projected
English	3.82	3.91	4.17
Math	2.74	4.03	4.96
Science	2.34	3.10	3.84
For. Lang.	0.76	0.87	1.01
Ment. Handi.	3.80	4.42	4.06
Hear.Visual	1.34	1.58	1.54
Emot./Sev. Hd.	4.76	4.99	5.07

*Taken from Appendix Table A13.

Table 15
Number of Teacher Education Graduates
Selected Fields Which Represent
A Decreasing Percentage of All Fields*

Subject Fields	1 1982-83 Actual	2 1983-84 Projected	3 1984-85 Projected
Elem. Educ.	38.88	33.97	32.87
Health/PE	10.89	10.72	10.11
Art	2.01	1.79	1.82
Speech Ther.	3.59	2.63	2.52
SLD	5.14	4.30	4.40

*Taken from Appendix Table A13.

foreign languages, mentally handicapped, hearing and visual, and emotionally handicapped. Table 15 lists subjects which represent a decreasing percentage of all fields--elementary education, health and physical education, art, speech therapy, and specific learning disabilities.

The next section compares the projected number of teacher education graduates and other indicators of teacher supply to projections of the number of new teachers needed in Florida through the end of the century.

Projected Supply and Demand

Projections: Demand

Long-range projections of teacher needs of Florida may be seen in Tables 16-18, drawn from Appendix Tables A14-A16. The number of teachers needed are based on enrollment projections and on the number of teachers expected to terminate each year. Projections shown in these tables are based on four data sources: (1) for ratios between the numbers of teacher and student enrollment, the Course Data File, which provides information on the current number of students and teachers in each course; (2) for an overall termination rate, teacher terminations for 1982-83; (3) for the distribution of the total number of teacher terminations by subject field, the teacher vacancy report (Part V of the Teacher Staff Survey); and (4) long-range projections of full-time equivalent enrollments for grades K-6 and 7-12, as based on age-group population projections.

In assessing future teacher needs, projections were first made of the number of teachers needed. These projections took into account both the projected number of teacher terminations and K-12 enrollment trends. The results of these calculations for each program area is shown in Table 16. Table 17 gives this same information for selected fields.

Table 18, an abbreviated version of Appendix Tables A12-A13, provides totals for each of the components show in Tables 16-17. Column 1 of Table 18 shows the estimated number of teachers in selected fields for 1983-84. The number of teachers expected to terminate during 1984-85 (Column 2) was calculated by multiplying the total number of teachers for 1983-84 times the termination rate for the most recent year (6.8 percent), and disaggregating this total by subject field according to the distribution of vacancies during fall 1983. Column 3 indicates the difference between the number of teachers needed for 1984-85--based on enrollment projections--and the number for 1983-84. Column 4 is the summation of Columns 2-3. Projections for 1985-86 are given in Columns 5-7.

Table 16
Projected Number of Teachers Needed
Through the Year 2000
By Program Area*

Subject Fields	Additional Teachers Needed*					
	1984-85	1985-86	1986-87	1990-91	1995-96	2000-01
Tot. Basic	5,068	5,087	5,290	6,052	6,914	6,022
Tot. Excep.	1,274	1,292	1,337	1,346	1,530	1,439
Tot. Voc.	524	491	383	348	813	627
Total	6,866	6,870	7,010	7,745	9,257	8,087

*Taken from Appendix Table A14.

Table 17
Projected Number of Teachers Needed
Through the Year 2000
Selected Fields

Subject Fields	Additional Teachers Needed*					
	1984-85	1985-86	1986-87	1990-91	1995-96	2000-01
Elem. Educ.	1,843	1,960	2,486	3,220	2,302	2,085
English	805	777	676	658	1,146	996
Math	495	474	404	392	725	603
Science	528	512	454	447	741	657
Soc. Stud.	348	331	272	256	520	422
For. Lang.	120	116	104	106	174	144

*Taken from Appendix Table A14.

Table 18
Number of Teachers Expected to Terminate
and Projected Need
Through 1985-86*

Subject Fields	1983-84	1984-85			1985-86		
	Total	TERM	GRO	TOT	TERM	GRO	TOT
Elem. Educ.	31,408	1,598	245	1,843	1,622	338	1,960
English	7,295	660	145	805	670	107	777
Math	5,528	388	107	495	394	80	474
Science	4,383	442	86	528	448	64	512
Soc. Stud.	4,220	265	83	348	269	62	330
For. Lang.	1,491	94	26	120	95	21	116
Tot. Excep.	9,488	1,038	236	1,274	1,054	238	1,292
Tot. Voc.	7,509	375	149	524	381	110	491

TERM=Estimated Number of Teachers Needed Due to Termination
GRO=Estimated Number of Teachers Needed Due to Enrollment Growth
(Negative Number Means Fewer Teachers Needed.)
TOT=Total Number Teachers Needed (Term + Gro)

*Taken from Appendix Table A15.

Although public school enrollments are projected to increase significantly over the coming years, in the short term much of this growth will be in the elementary grades, as the echo effect of the post-World War II baby boom begins to move through the education system. The impact of these increases will not reach the secondary level until the early 1990's. Thus while enrollments in grades K-6 will continue to grow until the end of the century and beyond, enrollments in grades 7-12 are projected to decline from 1985-86 to 1990-91, when they will begin a sharp increase that will last well beyond the year 2000. Compared to 1983-84, enrollments in grades K-6 will be 25 percent higher in 1990, 34 percent higher in 1995, and 36 percent higher in the year 2000. Using the same 1983-84 base year, enrollments in grades 7-12 will be about 3 percent lower in 1990, 18 percent higher in 1995 and 37 percent higher in 2000. Although enrollments in such critical fields as mathematics and science will be lower in 1990-91 than they were in 1983-84, even to keep pace with the present the state will need a significant number of new teachers each year to take the place resigning teachers. Beyond 1990 the need becomes much more critical because of increases in enrollments in grades 7-12.

Table 19 looks at the immediate needs that will face the State of Florida in 1985-86. In addition to teacher demand generated by grades K-12 enrollments and teacher terminations, Table 19 indicates also (1) the number of

Table 19
Projected Teacher Demand
1985-86*

Subject Fields	1 Number Needed Due to Enrollment Growth	2 Number Needed to Replace Resigning Teachers	3 Number Needed for Program Growth	4 Number Teachers Needed Excluding Current Out of Field	6 Total
Elem. Educ.	338	1,622	0	185	2,145
English	107	670	365	537	1,678
Math	80	394	483	439	1,396
Science	64	418	338	392	1,242
Soc. Stud.	62	269	184	349	864
For. Lang.	21	95	126	66	307
Speech Ther.	12	145	0	10	167
SLD	29	253	0	171	452
Emot/Sev. Hd.	15	232	68	209	524
Gifted	9	66	52	109	236
Tot. Basic	799	4,013	1,496	2,298	8,607
Tot. Excep.	118	1,054	120	713	2,005
Tot. Voc.	110	381	0	257	748
Total	1,028	5,448	1,616	3,268	11,360

*Taken from Appendix Table A17.

teachers that it is projected will take to staff additional classes to enable high school students to meet new state graduation requirements and (2) the number needed to staff each class with a teacher fully certified in the appropriate subject field. These two additional components are shown in Table 19.

Strictly speaking, these last two components of demand for 1985-86 may not even represent a need for additional teachers. For instance, high school students in the past who would not have fulfilled the new mathematics requirement were probably enrolled just as many hours, but in some subject field other than mathematics. The total number of teachers needed, therefore, might be the same. However, the new requirements do create additional demand in fields already experiencing shortages. A similar situation exists with respect to out-of-field teachers. The fact that the state has 3250 FTE teachers teaching out of field does not mean that the schools need that many additional teachers, but that they need that many teachers certified in different areas then they are currently.

Because it was unclear how districts would staff the seventh-period day, no estimates were made of the number of new teachers that the implementation of this program might require. Early indications are that districts seem to be hiring new teachers to fill these classes rather than paying experienced teachers a supplement to extend their teaching day. Thus it appears that numbers shown in Table 19 might well have been increased to include these new teachers. However, there is no data on which to base such an estimate.

Projections: Teacher Supply Compared with Demand, 1985-86

Projections of graduates of teacher education programs are available only through 1984-85. In absence of these or any other projections of teacher supply beyond that year, it seemed reasonable to focus on detailed projections of supply and demand for 1985-86, and then make only general forecasts of teacher supply for the fifteen years beyond.

There are good reasons why long-term projections are available for grade K-12 programs but only short-term projections for teacher education programs. Enrollments in K-12 programs are chiefly a product of demographic trends. Enrollments within particular higher education programs, however, are determined not only by demography but also by such factors as current economic conditions, perceived future employment opportunities, the level of salaries and other benefits offered by various occupations, and the relative social status of competing occupations. Therefore, attempts here to project teacher supply long range is limited to demographic projections of those age groups which provide a potential pool for new teachers.

Table 20 gives the projected number of teachers needed in 1985-86 in selected fields (Columns 1-2) and the potential teacher supply. Teacher supply is measured here by the projected number of Florida teacher education graduates for 1985-85 (Column 3) and the projected number of teachers passing the certification examination (Column 4). Column 5-6 shows the two indicators of supply as a percentage of the need.

Table 20
Projected Teacher Supply and Demand
1985-86

Subject Fields	1 Number Teachers Needed Excluding Current Out of Field	2 Total	3 Proj. Florida Education Graduates 1984-85	4 Proj. Number Passing Certification Exam	5 Projected Graduates As a Percentage of Total Number of Teacher Needed (3/2)	6 Projected Passing Examination (4/2)
Elem. Educ.	1,960	2,145	1,173	3,312	54.7	154.4
English	1,141	1,679	149	667	8.9	39.8
Math	957	1,396	177	371	12.7	26.6
Science	850	1,242	137	518	11.0	41.7
Soc. Stud.	515	863	126	253	14.6	29.3
For. Lang.	242	307	36	226	11.7	73.5
SLD	281	452	157	166	34.7	36.6
Emot/Sev. Hd.	315	524	181	162	34.5	30.9
Gifted	127	236	2	2	0.8	0.9
Tot. Basic	6,308	8,607	2,333	6,407	27.1	74.4
Tot. Excep.	1,292	2,005	652	1,088	32.5	54.2
Tot. Voc.	491	748	212	475	28.3	63.4
Total	8,092	11,360	3,197	7,969	28.1	70.2

*Taken from Appendix Table A17.

As shown, even if teachers educated outside the state are included (Column 4, projected number of teachers passing the teacher certification examination), among the subject fields shown, Florida can meet the state's projected needs only in elementary education. Even if the schools do not attempt to address the problem of teachers teaching out of field, the supply would still represent less than 60 percent of the demand in the subject fields of English, mathematics, social studies, specific learning disabilities, emotionally handicapped, and gifted.

The focus might be made even sharper by reducing the number of resigning teachers by 25 percent to take into account teachers moving from one school district to another. Although this would reduce the number of teachers needed significantly, the state would still not meet its need in any of the fields listed in Table 20 by depending on its graduates alone. If out-of-state teachers are added, the supply would continue to be insufficient in the fields of mathematics, social studies, specific learning disabilities,

emotionally handicapped, and gifted. In fields such as social studies, which are currently not experiencing a shortage, the supply might well expand to meet the demand. But in fields already in short supply, such an expansion would be much more difficult.

This approach--looking at demand without considering inter-district transfers--helps to pinpoint the fields which face the most severe shortages in the immediate future, but it overlooks reality in that it assumes that teachers who move from school district to school district have no impact on supply and demand.

Projections: Beyond 1985

As has been discussed, enrollments in grades K-12 are projected to increase over the next fifteen years, but at different rates throughout that period. Trends are also different for the elementary grades then they are for grades 7-12. Table 21 looks at the percentage of differences at five-year intervals in enrollments at the elementary and secondary level, and the corresponding population differences in the 22-24 and 25-29 age groups, the age groups which might be regarded as providing the biggest pool for beginning teachers. The base year for these comparisons is 1980, the last census year.

Table 21
Percentage Change
Grade K-12 Enrollments
and
Age Groups 22-24 and 25-29
1980-2000

	PERCENTAGE CHANGE			
Subject Fields	1980 to 1985	1985 to 1990	1990 to 1995	1995 to 2000
Grades K-6	0.4	22.0	7.1	1.8
Grades 7-12	3.4	-4.7	21.1	16.4
Total	1.8	9.3	12.9	8.3
Ages 22-24	9.8	-8.1	3.4	9.4
Ages 25-29	20.3	8.6	-9.7	-0.2
Total	16.1	2.4	-5.3	-3.6

Table 21 projects a 22 percent increase in grades K-6 enrollments from 1985 to 1990 and a 7 percent increase from 1990 to 1995. Enrollments at the grade 7-12 level are projected to decrease by 5 percent from 1985 to 1990, but increase by 21 percent from 1990 to 1995 and by 16 percent from 1995 to 2000.

The projected changes in the 22-24 and 25-29 year age groups are in sharp contrast to the K-12 trends. These age groups have been currently increasing as the youngest of the children born during the post-World War II baby boom became adults. From 1980 to 1985 the 22-24 year age group is projected to increase by 10 percent and the 25-29 year age group by 20 percent. What is significant, therefore, is that the state has been experiencing shortages in specific teaching fields during a period when, on one hand, school enrollments have tended to be stable and, on the other, the pool of potential teachers has been increasing.

What lies ahead during the next three five-year periods? As indicated in Table 21, the 22-24 year age group is projected to decrease by 8 percent from 1985 to 1990 and then continue to decrease at a slower pace through the end of the century. The 25-29 year age group, still feeling the impact of the end of the baby boom, will be increasing by 9 percent from 1985 to 1990, followed by a decrease of 10 percent from 1990 to 2000.

All of these projections pertain only to Florida and therefore include overall population growth from inmigration from other states. The pool of out-of-state new teachers on which Florida has long relied can be expected to decrease at even a faster rate than the in-state pool.

These two trends--projected increased grades K-12 enrollments and projected smaller potential teacher pool--taken together present a bleak picture for a long-term balance between teacher supply and demand in Florida. The five years from 1985 to 1990 will mark the beginning of a significant decrease in the size of the teacher pool. It is fortunate that during that period secondary school enrollments will also be decreasing. However, the current shortages in mathematics and science have occurred during a period when the size of the potential teacher pool was increasing. Therefore, it would seem that, unless the state can influence many more people to make teaching their career choice, the state will find it much harder to fill positions in critical fields in the next five years than it did during the five prior years. And beyond 1990 the potential imbalance between supply and demand is even more critical, as the size of the potential teacher pool continues to decline at the same time that secondary school enrollments are sharply increasing.

Appendix

Table A1: Estimated Number of Vacancies, Florida School Districts, Fall 1983

Table A2: Estimated Number of New Teachers Needed, Florida School Districts, Fall 1983

Table A3: Analysis of New Hires, Florida School Districts, Fall 1983

Table A4: Analysis of Vacancies, Florida School Districts, Fall 1983

Table A5: Number of Teacher Vacancies, Fall 1982 and Fall 1983

Table A6: Number of Teacher Vacancies, Fall 1982 and Fall 1983

Table A7: Number of Teachers Teaching Out of Field, Fall 1983

Table A8: Newly Certified Teachers By Subject Fields, 1983-84

Table A9: Newly Certified Teachers In Florida and Out of Florida, 1983-84

Table A10: Estimated Number of Newly Certified Teachers in 1983-84 From Florida Colleges and Universities Compared to the Number of 1982 Graduates, Florida Teacher Education Programs, Selected Fields

Table A11: Subject Field Distribution of Newly Certified Teachers, 1983-84 Compared to Distribution of Vacancies, Fall 1983

Table A12: Estimated Number of Graduates From Teacher Education Programs, Survey Completed Fall 1983

Table A13: Number of Teacher Education Graduates As a Percentage of All Fields

Table A14: Projected Number of Teachers Needed Through 2000-01

Table A15: Number of Teachers Expected to Terminate and Projected Need Through 1987-88

Table A16: Number of Teachers Expected to Terminate and Projected Need Through 2000-01

Table A17: Projected Teacher Supply and Demand, 1985-86

Table A1
Estimated Number of Vacancies
Florida School Districts
Fall 1983

Subject Fields	NEW HIRES: Certified — Taught Last Year in Another Florida School District	NEW HIRES: Certified — Did Not Teach Last Year In a Florida School District	NEW HIRES: Not Certified In the Appropriate Field	NEW HIRES: Total Number of New Hires	Number of Unfilled Vacancies	Total Number of Vacancies
Elem. Educ.	382	1,249	39	1,670	154	1,824
El. Read. Spec.	5	16	3	24	5	29
English	178	459	49	686	67	753
Math	95	279	37	411	32	443
Science	101	314	67	481	32	513
Soc. Stud.	75	192	16	283	19	302
For. Lang.	29	66	9	104	3	107
Health/PE	69	162	12	243	21	264
Art	26	56	0	82	5	87
Music	52	158	10	220	8	228
Other	35	95	11	141	27	168
Tot. Basic	1,044	3,033	268	4,345	373	4,718
Ment. Handi.	43	125	24	192	10	202
Occ/Phy. Ther.	0	8	0	8	22	30
Phy. Imp.	3	7	5	15	2	17
Speech Ther.	38	94	4	137	26	163
Hear/Visual	10	31	1	42	7	49
SLD	63	156	44	263	21	284
Emot/Sev. Hd.	41	128	51	221	40	261
Gifted	15	26	22	63	11	74
Home/Hos.	1	8	1	10	4	14
Var. Excep.	18	57	10	85	6	91
Tot. Excep.	232	642	162	1,036	149	1,185
Agri.	9	36	4	49	1	50
Bus.	17	70	2	89	11	100
Dist.	5	9	4	18	3	21
Health	1	27	0	28	1	29
Pub. Serv.	1	2	0	3	0	3
Home Econ.	18	43	2	63	3	66
Trades/Ind.	38	108	2	148	11	159
Tot. Voc.	89	295	14	398	30	428
Total.	1,363	3,964	452	5,779	552	6,331

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Table A2
Estimated Number of New Teachers Needed*
Florida School Districts
Fall 1983

Subject Fields	NEW HIRES: Certified Did Not Teach Last Year In a Florida School District	NEW HIRES: Not Certified In the Appropriate Field	Number of Unfilled Vacancies	Total Number of New Teachers Needed
Elem. Educ.	1,249	39	154	1,442
El. Read. Spec.	16	3	5	24
English	459	49	67	575
Math	279	37	32	348
Science	314	67	32	412
Soc. Stud.	192	16	19	227
For. Lang.	66	9	3	78
Health/PE	12	12	21	195
Art	5	0	5	61
Music	158	10	8	176
Other	95	11	27	133
Tot. Basic	333	268	373	3,674
Ment. Handi.	12	24	10	159
Occ/Phy. Ther.	0	0	22	30
Phy. Imp.	7	5	2	14
Speech Ther.	94	4	26	125
Hear/Visual	31	1	7	39
SLD	156	44	21	221
Emot/Sev. Hd.	128	51	40	220
Gifted	26	22	11	59
Home/Hos.	8	1	4	13
Var. Excep.	57	10	6	73
Tot. Excep.	642	162	149	953
Agri.	36	4	1	41
Bus.	70	2	11	83
Dist.	9	4	3	16
Health	27	0	1	28
Pub. Serv.	2	0	0	2
Home Econ.	43	2	3	48
Trades/Ind.	108	2	11	121
Tot. Voc.	295	14	30	339
Total	3,964	452	552	4,968

*This excludes the positions filled by cerified teachers who taught last year in another Florida school district.

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Table A3
Analysis of New Hires
Florida School Districts
Fall 1983

Subject Fields	Total Number of New Hires	CERTIFIED NEW HIRES: Percentage Taught Last Year in Another Florida School District	CERTIFIED NEW HIRES: Percentage Did Not Teach Last Year In a Florida School District	TOTAL NEW HIRES: Percentage Certified In The Appropriate Field	TOTAL NEW HIRES: Percentage Not Certified In The Appropriate Field
Elem. Educ.	1,670	23.4	76.6	97.7	2.3
El. Read. Spec.	24	23.8	76.2	87.5	12.5
English	686	28.0	72.0	92.9	7.1
Math	411	25.4	74.6	90.9	9.1
Science	481	24.3	75.7	86.2	13.8
Soc. Stud.	283	27.9	72.1	94.3	5.7
For. Lang.	104	30.6	69.4	90.9	9.1
Health/PE	243	29.9	70.1	95.2	4.8
Art	82	31.2	68.8	100.0	0.0
Music	220	24.6	75.4	95.4	4.6
Other	141	27.1	72.9	92.2	7.8
Tot. Basic	4,345	25.6	74.4	93.8	6.2
Ment. Handi.	192	25.5	74.5	87.4	12.6
Occ/Phy. Ther.	8	0.0	100.0	100.0	0.0
Phy. Imp.	15	30.0	70.0	69.2	30.8
Speech Ther.	137	28.9	71.1	97.0	3.0
Hear/Visual	42	23.7	76.3	97.2	2.8
SLD	263	28.6	71.4	83.2	16.8
Emot/Sev. Hd.	221	24.3	75.7	76.8	23.2
Gifted	63	36.8	63.2	65.1	34.9
Home/Hos.	10	12.5	87.5	87.5	12.5
Var. Excep.	85	23.5	76.5	88.4	11.6
Tot. Excep.	1,036	26.5	73.5	84.3	15.7
Agri.	49	19.5	80.5	91.7	8.3
Bus.	89	19.5	80.5	97.6	2.4
Dist.	18	33.3	66.7	78.6	21.4
Health	28	4.3	95.7	100.0	0.0
Pub. Serv.	3	33.3	66.7	100.0	0.0
Home Econ.	63	29.8	70.2	96.7	3.3
Trades/Ind.	148	25.8	74.2	98.4	1.6
Tot. Voc.	398	23.1	76.9	96.4	3.6
Total	5,779	25.6	74.4	92.2	7.8

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Table A4
Analysis of Vacancies
Florida School Districts
Fall 1983

Subject Fields	Estimated Number of Vacancies	V A C A N C I E S: Percentage Filled By New Hires Certified In The Appropriate Field	Not Certified In The Appropriate Field	Percentage Unfilled	Vacancies Unfilled or Filled Out of Field Number	Percentage
Elem. Educ.	1,824	89.4	2.1	8.4	193	10.6
El. Read. Spec.	29	72.4	10.3	17.2	8	27.6
English	753	84.6	6.5	8.9	116	15.4
Math	443	84.3	8.5	7.2	69	15.7
Science	513	80.8	13.0	6.2	99	19.2
Soc. Stud.	302	88.4	5.3	6.3	35	11.6
For. Lang.	107	88.4	8.8	2.8	12	11.6
Health/PE	264	87.6	4.4	8.0	33	12.4
Art	87	94.3	0.0	5.7	5	5.7
Music	228	92.1	4.4	3.5	18	7.9
Other	168	77.4	6.5	16.1	38	22.6
Tot. Basic	4,718	86.4	5.7	7.9	641	13.6
Ment. Handi.	202	83.1	12.0	5.0	34	16.9
Occ/Phy. Ther.	30	26.7	0.0	73.3	22	73.3
Phy. Imp.	17	61.1	27.1	11.8	7	38.9
Speech Ther.	163	81.5	2.5	16.0	30	18.5
Hear/Visual	49	83.3	2.4	14.3	8	16.7
SLD	284	77.0	15.6	7.4	65	23.0
Emot/Sev. Hd.	261	65.1	19.6	15.3	91	34.9
Gifted	74	55.4	29.7	14.9	33	44.6
Home/Hos.	14	62.5	8.9	28.6	5	37.5
Var. Excep.	91	82.6	10.8	6.6	16	17.4
Tot. Excep.	1,185	73.7	13.7	12.6	311	26.3
Agri.	50	89.8	8.2	2.0	5	10.2
Bus.	100	86.9	2.1	11.0	13	13.1
Dist.	21	67.3	18.4	14.3	7	32.7
Health	29	96.6	0.0	3.4	1	3.4
Pub. Serv.	3	100.0	0.0	0.0	0	0.0
Home Econ.	66	92.3	3.2	4.5	5	7.7
Trades/Ind.	159	91.6	1.5	6.9	13	8.4
Tot. Voc.	428	89.6	3.4	7.0	44	10.4
Total	6,331	84.1	7.1	8.7	1,004	15.9

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Table A5
Number of Teacher Vacancies
Fall 1982 and Fall 1983

Subject Field	FALL 1982 Positions Filled	FALL 1982 Vacancies	FALL 1983 Positions Filled	FALL 1983 Vacancies
Elem. Educ.	1,640	1,695	1,670	1,824
El. Read. Spec.	59	61	24	29
English	561	592	686	753
Math	351	401	411	443
Science	310	345	481	513
Soc. Stud.	200	211	283	302
For. Lang.	75	85	104	107
Health/PE	286	301	243	264
Art	87	92	82	87
Music	218	234	220	228
Other	143	146	141	168
Tot. Basic	3,930	4,163	4,345	4,718
Ment. Handi.	199	233	192	202
Occ/Phy. Ther.	23	29	8	30
Phy. Imp.	4	10	15	17
Speech Ther.	166	185	137	163
Hear/Visual	48	60	42	49
SLD	246	288	263	284
Emot/Sev. Hd.	198	264	221	261
Gifted	49	68	63	74
Home/Hos.	2	5	10	14
Var. Excep.	91	99	85	91
Tot. Excep.	1,026	1,241	1,036	1,185
Agri.	46	53	49	50
Bus.	95	102	89	100
Dist.	17	24	18	21
Health	24	25	28	29
Pub. Serv.	12	13	3	3
Home Econ.	60	62	63	66
Trades/Ind.	172	183	148	159
Tot. Voc.	426	462	398	428
Total	5,382	5,866	5,779	6,331

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Table A6
Number of Teacher Vacancies
Fall 1982 and Fall 1983

Subject Field	FALL 1982 Percentage of Positions Filled	FALL 1982 Percentage of Vacancies	FALL 1983 Percentage of Positions Filled	FALL 1983 Percentage of Vacancies
Elem. Educ.	30.5	28.9	28.9	28.8
El. Read Spec.	1.1	1.0	0.4	0.5
English	10.4	10.1	11.9	11.9
Math	6.5	6.8	7.1	7.0
Science	5.8	5.9	8.3	8.1
Soc. Stud.	3.7	3.6	4.9	4.8
For. Lang.	1.4	1.5	1.8	1.7
Health/PE	5.3	5.1	4.2	4.2
Art	1.6	1.6	1.4	1.4
Music	4.1	4.0	3.8	3.6
Other	2.7	2.5	2.4	2.7
Tot. Basic	73.0	71.0	75.2	74.5
Ment. Handi.	3.7	4.0	3.3	3.2
Occ/Phy. Ther.	0.4	0.5	0.1	0.5
Phy. Imp.	0.1	0.2	0.3	0.3
Speech Ther.	3.1	3.2	2.4	2.6
Hear/Visual	0.9	1.0	0.7	0.8
SLD	4.6	4.9	4.6	4.5
Emot/Sev. Hd.	3.7	4.5	3.8	4.1
Gifted	0.9	1.2	1.1	1.2
Home/Hos.	0.0	0.1	0.2	0.2
Var. Excep.	1.7	1.7	1.5	1.4
Tot. Excep.	19.1	21.2	17.9	18.7
Agri.	0.9	0.9	0.9	0.8
Bus.	1.8	1.7	1.5	1.6
Dist.	0.3	0.4	0.3	0.3
Health	0.5	0.4	0.5	0.5
Pub. Serv.	0.2	0.2	0.1	0.1
Home Econ.	1.1	1.1	1.1	1.0
Trades/Ind.	3.2	3.1	2.6	2.5
Tot. Voc.	7.9	7.9	6.9	6.8
Total	100.0	100.0	100.0	100.0

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Table A7
Number of Teachers Teaching Out of Field
Fall 1983*

Subject Fields	Number of FTE Teachers 1 Total	2 Teaching Out of Field	3 Percentage 2/1	Number of Classes 4 Total	5 Taught by Out-of-Field Teachers	6 Percentage 5/4
Elem. Educ.	28,114	185	0.7	30,235	241	0.8
El. Read Spec.	434	12	2.7	2,587	50	1.9
English	7,343	537	7.3	38,214	2,731	7.1
Math	5,536	437	7.9	28,846	2,266	7.9
Science	4,406	399	9.1	22,912	1,985	8.7
Soc. Stud.	4,243	349	8.2	21,945	1,831	8.3
For. Lang.	1,469	66	4.5	8,738	344	3.9
Health/PE	4,905	213	4.3	37,557	1,165	3.1
Art	1,552	42	2.7	18,087	285	1.6
Music	2,894	76	2.6	29,187	591	2.0
Other	1,399	86	6.2	6,459	433	6.7
Tot. Basic	62,295	2,402	3.9	244,767	11,922	4.9
Ment. Handi.	2,025	118	5.8	5,542	460	8.3
Occ/Phy. Ther.	138	3	2.5	1,238	37	3.0
Phy. Imp.	304	14	4.7	1,684	75	4.5
Speech Ther.	1,052	10	1.0	11,797	133	1.1
Hear/Visual	378	11	3.0	1,476	60	4.1
SLD	2,339	171	7.3	10,965	843	7.7
Emot/Sev. Hd.	1,196	209	17.5	4,288	836	19.5
Gifted	800	109	13.6	3,497	464	13.3
Home/Hos.	204	3	1.5	564	6	1.1
Var. Excep.	1,261	64	5.1	5,436	266	4.9
Tot. Excep.	9,697	713	7.4	46,487	3,180	6.8
Agri.	497	50	10.1	2,301	248	10.8
Bus.	2,126	58	2.7	9,944	288	2.9
Dist.	344	15	4.2	1,590	66	4.2
Health	506	14	2.8	1,108	61	5.5
Pub. Serv.	115	4	3.3	410	16	3.9
Home Econ.	1,371	21	1.5	6,889	118	1.7
Trades/Ind.	2,600	95	3.7	10,367	444	4.3
Tot. Voc.	7,558	257	3.4	32,609	1,241	3.8
Total	79,550	3,372	4.2	323,863	16,343	5.0

*Source: Course Code Data File

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Table A8
Newly Certified Teachers
By Subject Fields
1983-84

Subject Fields	NUMBER				PERCENTAGE OF ALL FIELDS			
	From Florida Colleges	From Colleges Outside Florida	Uncoded*	Total	Florida	Outside Florida	Uncoded	Total
Elem. Educ.	621	1,016	768	2,405	43.49	40.25	41.09	41.32
El. Read Spec.	1	14	8	23	0.07	0.55	0.43	0.40
English	95	234	134	463	6.65	9.27	7.17	7.95
Math	57	126	87	270	3.99	4.99	4.65	4.64
Science	90	166	89	345	6.30	6.58	4.76	5.93
Soc. Stud.	38	87	46	171	2.66	3.45	2.46	2.94
For. Lang.	20	91	49	160	1.40	3.61	2.62	2.75
Health/PE	100	181	150	431	7.00	7.17	8.03	7.40
Art	28	59	42	129	1.96	2.34	2.25	2.22
Music	56	99	86	241	3.92	3.92	4.60	4.14
Tot. Basic	1,106	2,073	1,459	4,638	77.45	82.13	78.06	79.68
Ment. Handi.	63	78	79	220	4.41	3.09	4.23	3.78
Phy. Imp.	0	2	1	3	0.00	0.08	0.05	0.05
Speech Ther.	43	118	52	213	3.01	4.68	2.78	3.66
Hear/Visual	14	15	17	46	0.98	0.59	0.91	0.79
SLD	69	14	70	153	4.83	0.55	3.75	2.63
Emot/Sev. Hd.	62	19	41	122	4.34	0.75	2.19	2.10
Gifted	0	1	1	2	0.00	0.04	0.05	0.03
Var. Excep.	1	40	23	64	0.07	1.58	1.23	1.10
Tot. Excep.	252	287	284	823	17.65	11.37	15.20	14.14
Agri.	4	10	9	23	0.28	0.40	0.48	0.40
Bus.	30	53	44	127	2.10	2.10	2.35	2.18
Health	17	12	22	51	1.19	0.48	1.18	0.88
Home Econ.	14	42	39	95	0.98	1.66	2.09	1.63
Trades/Ind.	5	47	12	64	0.35	1.86	0.64	1.10
Tot. Voc.	70	164	126	360	4.90	6.50	6.74	6.18
Total	1,428	2,524	1,869	5,821	100.00	100.00	100.00	100.00

*When the Active Certificate File was searched, it was found that college/university was not coded on a number of records. The records not coded seemed to be at random. Therefore, for the purposes of this report, the uncoded records are assumed to have the same distribution by the categories Florida and Non-Florida as do the coded records.

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Table A9
Newly Certified Teachers
In Florida and Out of Florida*
1983-84

Subject Fields	NUMBER		PERCENTAGE	
	Florida	Out of Florida	Florida	Out of Florida
Elem. Educ.	621	1,016	37.9	62.1
El. Read Spec.	1	14	6.7	93.3
English	95	234	28.9	71.1
Math	57	126	31.1	68.9
Science	90	166	35.2	64.8
Soc. Stud.	38	87	30.4	69.6
For. Lang.	20	91	18.0	82.0
Health/PE	100	181	35.6	64.4
Art	28	59	32.2	67.8
Music	56	99	36.1	63.9
Tot. Basic	1,106	2,073	34.8	65.2
Ment. Handi.	63	78	44.7	55.3
Phy. Imp.	0	2	0.0	100.0
Speech Ther.	43	118	26.7	73.3
Hear/Visual	14	15	48.3	51.7
SLD	69	14	83.1	16.9
Emot/Sev. Hd.	62	19	76.5	23.5
Gifted	0	1	0.0	100.0
Var. Excep.	1	40	2.4	97.6
Tot. Excep.	252	287	46.8	53.2
Agri.	4	10	28.6	71.4
Bus.	30	53	36.1	63.9
Health	17	12	58.6	41.4
Home Econ.	14	42	25.0	75.0
Trades/Ind.	5	47	9.6	90.4
Tot. Voc.	70	164	29.9	70.1
Total	1,428	2,524	36.1	63.9

*Includes only those teachers for which the item college/university was coded on to the computer record. (See footnote to Table A8.)

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Table A10
Estimated Number of Newly Certified Teachers in 1983-84
From Florida Colleges and Universities
Compared to the Number of 1982 Graduates,
Florida Teacher Education Programs
Selected Fields

Subject Fields	1 Graduates Teacher Education Programs	2 Estimated Number New Certified Teachers*	3 Percentage (2/1)
Elem. Educ.	1,263	912	0.72
English	131	134	1.02
Math	94	84	0.89
Science	80	121	1.52
Soc. Stud.	107	52	0.49
For. Lang.	26	29	1.11
Health/PE	373	153	0.41
Art	69	42	0.60
Music	87	87	1.00
Ment. Handi.	130	98	0.76
Speech Ther.	123	57	0.46
Hear/Visual	46	22	0.48
SLD	176	127	0.72
Emot/Sev. Hd.	163	93	0.57
Agri.	20	7	0.33
Bus.	69	46	0.67
Home Econ.	36	24	0.66
Trades/Ind.	49	6	0.13

*Estimate based both on all newly certified teachers, not just those for which college/university was coded. (See footnote to Table A8.)

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Table A11
Subject Field Distribution of
Newly Certified Teachers, 1983-84
Compared to Distribution of Vacancies, Fall 1983

Subject Fields	Number in Each Subject Field as a Percentage of All Fields: Newly Certified Teachers	Vacancies
Elem. Educ.	41.32	28.81
El. Read Spec.	0.40	0.46
English	7.95	11.89
Math	4.64	7.00
Science	5.93	8.10
Soc. Stud.	2.94	4.77
For. Lang.	2.75	1.69
Health/PE	7.40	4.17
Art	2.22	1.37
Music	4.14	3.60
Other	0.00	2.65
Tot. Basic	79.68	74.52
Ment. Handi.	3.78	3.19
Occ/Phy. Ther.	0.00	0.47
Phy. Imp.	0.05	0.27
Speech Ther.	3.66	2.57
Hear/Visual	0.79	0.77
SLD	2.63	4.49
Emot/Sev. Hd.	2.10	4.12
Gifted	0.03	1.17
Home/Hos.	0.00	0.22
Var. Excep.	1.10	1.44
Tot. Excep.	14.14	18.72
Agri.	0.40	0.79
Bus.	2.18	1.58
Dist.	0.00	0.33
Health	0.88	0.46
Pub. Serv.	0.00	0.05
Home Econ.	1.63	1.04
Trades/Ind.	1.10	2.51
Tot. Voc.	6.18	6.76
Total	100.00	100.00

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Table A12
Estimated Number of Graduates
From Teacher Education Programs*
Survey Completed Fall 1983

Subject Fields	1 1982-83 Projected**	2 1982-83 Actual	3 1983-84 Projected	4 1984-85 Projected
Elem. Educ.	1,183	1,263	1,138	1,173
El. Read Spec.	55	113	111	105
English	154	131	131	149
Math	65	94	135	177
Science	74	80	104	137
Soc. Stud.	135	107	133	126
For. Lang.	20	26	29	36
Health/PE	381	373	359	361
Art	73	69	60	65
Music	104	87	102	109
Other	216	238	255	267
Tot. Basic	2,460	2,581	2,557	2,705
Ment. Handi.	115	130	148	145
Phy. Imp.	6	4	4	4
Speech Ther.***	7	123	88	90
Hear/Visual	22	46	53	55
SLD	218	176	144	157
Emot/Sev. Hd.	119	163	167	181
Gifted	0	1	2	2
Var. Excep.	40	17	10	18
Total Excep.	527	660	616	652
Agri.	20	20	16	25
Bus.	59	69	63	70
Dist.	18	10	8	8
Home Econ.	17	36	44	47
Trades/Ind.	36	49	46	62
Tot. Voc.	150	184	177	212
Total	3,137	3,425	3,350	3,569

*Based on a survey of deans of 25 Florida colleges and department of education.
**Number of graduates for 1982-83 projected on last year's survey.
***In the state universities speech therapy programs are in colleges of arts and sciences rather than in colleges of education. Graduates of these programs are included in this year's report, whereas information on these programs was not collected in prior reports.

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Table A13
Number of Teacher Education Graduates
As a Percentage of All Fields

Subject Fields	1 1982-83 Actual	2 1983-84 Projected	3 1984-85 Projected
Elem. Educ.	36.88	33.97	32.87
El. Read. Spec.	3.30	3.31	2.94
English	3.82	3.91	4.17
Math	2.74	4.03	4.96
Science	2.34	3.10	3.84
Soc. Stud.	3.12	3.97	3.53
For. Lang.	0.76	0.87	1.01
Health/PE	10.89	10.72	10.11
Art	2.01	1.79	1.82
Music	2.54	3.04	3.05
Other	6.95	7.61	7.48
Tot. Basic	75.36	76.33	75.79
Ment. Handi.	3.80	4.42	4.06
Phy. Imp.	0.12	0.12	0.11
Speech Ther.	3.59	2.63	2.52
Hear/Visual	1.34	1.58	1.54
SLD	5.14	4.30	4.40
Emot/Sev. Hd.	4.76	4.99	5.07
Gifted	0.03	0.06	0.06
Var. Excep.	0.50	0.30	0.50
Tot. Excep.	19.27	18.39	18.27
Agri.	0.58	0.48	0.70
Bus.	2.01	1.88	1.96
Dist.	0.29	0.24	0.22
Home Econ.	1.05	1.31	1.32
Trades/Ind.	1.43	1.37	1.74
Tot. Voc.	5.37	5.28	5.94
Total	100.00	100.00	100.00

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Table A14
Projected Number of Teachers Needed
Through 2000-01

Programs	Total Teachers 1983-84	Additional Teachers Needed* 1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1995-96	2000-01
Elem. Educ.	31,408	1,843	1,960	2,486	2,906	3,125	3,114	3,220	2,302	2,085
El. Read Spec.	485	29	31	39	46	49	49	50	36	33
English	7,295	805	777	676	593	526	5,590	658	1,146	996
Math	5,528	495	474	404	346	298	321	392	725	603
Science	4,383	528	512	454	406	368	388	447	741	657
Soc. Stud.	4,220	348	330	272	223	183	201	256	520	422
For. Lang.	1,491	120	116	104	93	84	89	106	174	144
Health/PE	5,052	312	303	280	260	238	251	301	463	364
Art	1,618	100	98	97	95	90	94	108	145	116
Music	3,009	245	242	237	232	224	232	260	342	294
Other	1,442	244	243	240	236	232	238	254	319	307
Tot. Basic	65,931	5,068	5,087	5,290	5,436	5,417	5,536	6,052	6,914	6,022
Ment. Handi.	1,981	205	205	206	206	203	208	226	276	251
Occ/Phy. Ther.	135	28	28	29	30	31	31	32	35	35
Phy. Imp.	298	18	19	21	22	22	23	25	25	21
Speech Ther.	1,029	153	157	170	181	187	188	194	190	190
Hear/Visual	370	48	48	50	51	52	53	56	62	59
SLD	2,289	279	281	290	296	297	302	322	364	344
Emot/Sev. Hd.	1,170	308	315	324	257	257	261	274	317	312
Gifted	783	122	127	136	85	85	87	94	103	92
Home/Hos.	200	15	15	15	14	13	14	16	22	8
Var. Excep.	1,234	98	97	96	96	93	96	107	136	117
Tot. Excep.	9,488	1,274	1,292	1,337	1,239	1,240	1,263	1,346	1,530	1,439
Agri.	494	54	52	45	39	35	37	44	77	66
Bus.	2,112	130	120	89	64	43	51	79	207	153
Dist.	341	25	24	19	15	11	13	17	39	30
Health	503	35	33	26	20	15	17	24	55	42
Pub. Serv.	114	5	4	3	1	0	1	2	9	5
Home Econ.	1,362	85	79	59	42	29	35	52	135	100
Trades/Ind.	2,583	191	179	142	111	87	97	131	292	229
Tot. Voc.	7,509	524	491	383	293	220	251	348	813	627
Total	82,928	6,866	6,870	7,010	6,967	6,878	7,049	7,745	9,257	8,087

*Additional Teachers Needed is the total number teachers in the prior years, minus terminating teachers, plus the number needed to keep up with projected number of students (See Table A15-A16). Includes vacancies due to inter-district moves as well as new teachers needed.

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Table A15
Number of Teachers Expected to Terminate
and Projected Need
Through 1987-88*

Fields	1983-84 Total	1984-85 TERM	1984-85 GRO	1984-85 TOT	1985-86 TERM	1985-86 GRO	1985-86 TOT	1986-87 TERM	1986-87 GRO	1986-87 TOT	1987-88 TERM	1987-88 GRO	1987-88 TOT
Elem. Educ.	31,408	1,598	245	1,843	1,622	338	1,960	1,645	842	2,486	1,669	1,237	2,906
El. Read. Spec.	485	25	4	29	26	5	31	26	13	39	27	19	46
English	7,295	660	145	805	670	107	777	679	-3	676	689	-96	593
Math	5,528	388	107	495	394	80	474	400	5	404	405	-59	346
Science	4,383	442	86	528	448	64	512	455	0	454	461	-55	406
Soc. Stud.	4,220	265	83	348	269	62	330	272	0	272	276	-53	223
For. Lang.	1,491	94	26	120	95	21	116	96	7	104	98	-4	93
Health/PE	5,052	231	81	312	235	68	303	238	42	280	242	19	260
Art	1,618	76	24	100	77	21	98	78	18	97	80	15	95
Music	3,009	200	45	245	203	39	242	206	32	237	209	24	232
Other	1,442	221	23	244	224	19	243	227	12	240	231	6	236
Tot. Basic	65,931	4,200	868	5,068	4,263	824	5,087	4,323	968	5,290	4,385	1,051	5,436
Ment. Handi.	1,981	177	28	205	180	26	205	182	24	206	185	22	206
Occ/Phy. Ther.	135	26	2	28	27	2	28	27	2	29	27	3	30
Phy. Imp.	298	15	4	18	15	4	19	15	5	21	16	6	22
Speech Ther.	1,029	143	10	153	145	12	157	147	23	170	149	32	181
Hear/Visual	370	43	5	48	44	5	48	44	6	50	45	7	51
SLD	2,289	249	30	279	253	29	281	256	34	290	260	37	296
Emot/Sev. Hd.	1,170	229	79	308	232	83	315	235	89	324	239	18	257
Gifted	783	65	57	122	66	61	127	67	69	136	68	17	85
Home/Hos.	200	12	3	15	12	3	15	13	2	15	13	1	14
Var. Excep.	1,234	80	18	98	81	16	97	82	14	96	83	13	96
Tot. Excep.	9,488	1,038	236	1,274	1,054	238	1,292	1,069	268	1,337	1,084	154	1,239
Agri.	494	44	10	54	44	7	52	45	0	45	46	-7	39
Bus.	2,112	88	42	130	89	31	120	90	-1	89	91	-28	64
Dist.	341	18	7	25	19	5	24	19	0	19	19	-5	15
Health	503	25	10	35	26	7	33	26	0	26	27	-7	20
Pub. Serv.	114	3	2	5	3	2	4	3	0	3	3	-2	1
Home Econ.	1,362	58	27	85	59	20	79	60	-1	59	60	-18	42
Trades/Ind.	2,583	139	51	191	141	38	179	143	-1	142	145	-34	111
Tot. Voc.	7,509	375	149	524	381	110	491	386	-3	383	392	-99	293
Total	82,928	5,613	1,253	6,866	5,698	1,172	6,870	5,777	1,233	7,010	5,861	1,107	6,967

TERM=Estimated Number of Teachers Needed Due to Termination
GRO=Estimated Number of Teachers Needed Due to Enrollment Growth
(Negative Number Means Fewer Teachers Needed.)
TOT=Total Number of Teachers Needed (Term + Gro)

*Projections based on projected enrollments, with grades K-6 and grades 7-12 projected separately. Exceptional projections reflect expected program growth through 1985-86.

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Table A16
Number of Teachers Expected to Terminate
and Projected Need
Through 2000-01*

Fields	1988-89			1989-90			1990-91			1995-96**			2000-01**		
	TERM	GRO	TOT	TERM	GRO	TOT	TERM	GRO	TOT	TERM	GRO	TOT	TERM	GRO	TOT
Elem. Educ.	1,690	1,435	3,125	1,708	1,406	3,114	1,728	1,492	3,220	1,928	373	2,302	2,093	-9	2,085
El. Read. Spec.	27	22	49	27	22	49	27	23	50	31	6	36	33	0	33
English	698	-172	526	705	-146	559	714	-56	658	796	350	1,146	864	132	996
Math	410	-112	298	415	-94	321	420	-28	392	468	256	725	508	95	603
Science	467	-99	368	472	-84	388	478	-31	447	533	209	741	578	78	657
Soc. Stud.	280	-96	183	283	-82	201	286	-30	256	319	201	520	347	75	422
For. Lang.	99	-15	84	100	-11	89	101	5	106	113	61	174	123	22	144
Health/PE	245	-7	238	247	4	251	250	51	301	279	184	463	303	61	364
Art	81	10	90	81	12	94	82	26	108	92	53	145	100	17	116
Music	211	13	224	214	18	232	216	44	260	241	101	342	262	32	294
Other	233	-1	232	236	2	238	239	15	254	266	52	319	289	17	307
Tot. Basic	4,441	976	5,417	4,489	1,047	5,536	4,542	1,510	6,052	5,067	1,847	6,914	5,501	521	6,022
Ment. Handi.	187	16	203	189	19	208	191	35	226	214	62	276	232	19	251
Occ/Phy. Ther.	28	3	31	28	3	31	28	4	32	32	3	35	34	1	35
Phy. Imp.	16	7	22	16	7	23	16	9	25	18	7	25	20	2	21
Speech Ther.	151	36	187	153	35	188	154	40	194	172	18	190	187	3	190
Hear/Visual	45	6	52	46	7	53	46	9	56	52	10	62	56	3	59
SLD	263	34	297	266	36	302	269	53	322	300	64	364	326	18	344
Emot/Sev. Hd.	242	15	257	244	17	261	247	27	274	276	41	317	300	12	312
Gifted	69	17	85	69	17	87	70	24	94	78	25	103	85	7	92
Home/Hos.	13	0	13	13	1	14	13	3	16	15	7	22	16	2	18
Var. Excep.	84	9	93	85	11	96	86	21	107	96	39	136	104	12	117
Tot. Excep.	1,098	142	1,240	1,110	153	1,263	1,123	223	1,346	1,253	277	1,530	1,360	79	1,439
Agri.	46	-12	35	47	-10	37	47	-4	44	53	24	77	57	9	66
Bus.	93	-50	43	94	-42	51	95	-16	79	106	101	207	115	38	153
Dist.	19	-8	11	20	-7	13	20	-3	17	22	16	39	24	6	30
Health	27	-12	15	27	-10	17	27	-4	24	31	24	55	33	9	42
Pub. Serv.	3	-3	0	3	-2	1	3	-1	2	3	5	9	3	2	5
Home Econ.	61	-32	29	62	-27	35	63	-10	52	70	65	135	76	25	100
Trades/Ind.	147	-61	87	149	-52	97	151	-20	131	168	124	292	182	47	229
Tot. Voc.	397	-177	220	401	-150	251	406	-57	348	452	361	813	491	136	627
Total	5,936	942	6,878	5,999	1,050	7,049	6,070	1,675	7,745	6,772	2,485	9,257	7,352	735	8,087

TERM=Estimated Number of Teachers Needed Due to Termination
GRO=Estimated Number of Teachers Needed Due to Enrollment Growth
(Negative Number Means Fewer Teachers Needed.)
TOT=Total Number of Teachers Needed (Term + Gro)

*Projections based on projected enrollments, with grades K-6 and grades 7-12 projected separately.
**Termination and growth shown are from prior year. Intervening years between 1990 to 1995 and 1996 to 2000 are not shown.

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Table A17
Projected Teacher Supply and Demand
1985-86

Subject Fields	1 Number Needed Due to Enrollment Growth	2 Number Needed to Replace Resigning Teachers	3 Number Needed for Program Growth	4 Number Teachers Needed Excluding Current Out of Field	5 Number Needed to Replace Teachers Now Teaching Out of Field	6 Total	7 Proj. Florida Education Graduates 1984-85	8 Proj. Number Passing Certification Exam
Elem. Educ.	338	1,622	0	1,960	185	2,145	1,173	3,312
English	107	670	365	1,141	537	1,678	149	667
Math	80	394	483	957	439	1,396	177	371
Science	64	448	338	850	392	1,242	137	518
Soc. Stud.	62	269	184	515	349	863	126	253
For. Lang.	21	95	126	242	66	307	36	226
Health/PE	68	235	0	303	213	516	361	569
Art	21	77	0	98	42	140	65	176
Music	39	203	0	242	76	318	109	314
Tot. Basic	799	4,013	1,496	6,308	2,298	8,607	2,333	6,407
Ment. Handi.	26	180	0	205	118	323	145	285
Occ/Phy. Ther.	2	27	0	28	3	32	0	0
Phy. Imp.	4	15	0	19	14	33	4	4
Speech Ther.	12	145	0	157	10	167	90	327
Hear/Visual	5	44	0	48	11	59	55	58
SLD	29	253	0	281	171	452	157	166
Emot/Sev. Hd.	15	232	68	315	209	524	181	162
Gifted	9	66	52	127	109	236	2	2
Home/Hos.	3	12	0	15	3	18	0	0
Var. Excep.	16	81	0	97	64	161	18	84
Tot. Excep.	118	1,054	120	1,292	713	2,005	652	1,088
Agri.	7	44	0	52	50	102	25	28
Bus.	31	89	0	120	58	178	70	168
Dist.	5	19	0	24	15	38	8	0
Health	7	26	0	33	14	47	0	58
Pub. Serv.	2	3	0	4	4	8	0	0
Home Econ.	20	59	0	79	21	99	47	114
Trades/Ind.	38	141	0	179	95	274	62	106
Tot. Voc.	110	381	0	491	257	748	212	475
Total	1,028	5,448	1,616	8,092	3,268	11,360	3,197	7,969

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